

WIDE-BAND ARRAY ANTENNAABSTRACT OF THE DISCLOSURE

5           The present invention provides a wide-band array  
antenna using a single real-valued multiplier for each  
antenna element, which is simple in construction and  
suitable for WCDMA mobile communication system. A  
10       rectangular array antenna is formed by  $N \times M$  antenna  
elements. Each antenna element has a frequency dependent  
gain which is the same for all elements. Each antenna  
element is connected to a multiplier with a single real-  
valued coefficient, which is determined by properly  
15       selecting number of points on a  $u-v$  plane defined for  
simplifying the design procedure according to the design  
algorithm of the present invention.